**Supplementary material- Appendix 1**

*Obtaining occurrence data*

 Occurrence data was obtained through museums’ databases (for all Neotropical regions), data from collaborating researchers, data collected first-hand and scientific articles (only for Brazil). Databases used are from the Smithsonian Museum, GBIF (Global Biodiversity Information Facility), MANIS (Mammal Networked Information System), and CRIA Species Link (http://splink.cria.org.br/). We searched for scientific articles in “Web of Science” using the keywords “Chiroptera and Brazil”; and in Scielo (Scientific Electronic Library Online) using the keywords “Chiroptera and Brazil”, and later “morcegos and Brasil”, since this platform contains articles in both English and Portuguese. Whenever geographic coordinates were not available in scientific articles or in the databases, we used the Google Earth software (Google Inc. 2009) to identify the approximate coordinates from informed landmarks.

 We looked for false occurrences in museums’ databases by checking for occurrences that were outside the most recent geographic distribution of a species provided in literature. *Platyrrhinus incarum* was a synonym of *Platyrrhinus helleri* until 2010 (Velazco *et al.* 2010), so occurrences of *P. helleri* registered before 2010 and overlapping *P. incarum* distribution were considered as *P. incarum* occurrences. We also had a case of a species being known by two scientific names: *Artibeus cinereus* for those who believe *Demanura* is a sub-genus of *Artibeus* (Simmons 2005), and *Dermanura cinerea* for those who believe that *Dermanura* is a genus (Solari *et al.* 2009). In this last case, both scientific names were searched on databases.

*Bat sampling*

 Bats were sampled in 18 forest patches in the state of Goiás, within the Cerrado biome (Table S3), between March of 2012 and April of 2014. Each forest patch was visited once, and each visit had the duration of four consecutive nights. We used 20 mist nets (9m X 3m) per sampling that were positioned from the edge towards the core of each forest patch, nets remained in the same position for the four consecutive nights. Mist nets were open at sunset and close six hours later every sampling night. Bats over 5 grams were marked using enumerated bands (Sikes & Gannon 2011). Since all sites had the same sampling effort, we considered as abundance the total number of captures of a species minus the number of recaptures of the same species. The explanatory variable was the natural vegetation loss calculated for all Cerrado, as explained above. We looked for the natural vegetation loss value for each landscape where a survey was conducted, and used this value in the analysis.

References

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